

INFORMATION PAPER

DASG-HCA
17 December 2004

SUBJECT: Counting Doses in Combined Regimens of Twinrix® and Separate Hepatitis A and Hepatitis B Vaccines

1. Purpose. To describe the required number of doses using various combinations of combination or stand-alone vaccines that immunize against hepatitis A virus and hepatitis B virus.

2. Facts.

a. Two hepatitis A vaccines are marketed in the United States: Havrix (manufactured by GlaxoSmithKline) and Vaqta (manufactured by Merck). The adult dose of Havrix is 1,440 ELISA units per 1 ml at least 6 months apart. The adult dose of Vaqta is two doses of 50 Merck units per 1 ml at least 6 months apart.

b. Two hepatitis B vaccines are marketed in the United States: Engerix-B (manufactured by GlaxoSmithKline) and Recombivax-HB (manufactured by Merck). The adult dose of Engerix-B is 20 mcg per 1 ml, typically at a 0-1-6 month schedule. The adult dose of Recombivax-HB is 10 mcg per 1 ml, typically at a 0-1-6 month schedule.

c. GlaxoSmithKline also markets Twinrix, a combination vaccine consisting of 720 ELISA units of hepatitis A antigen and 20 mcg of hepatitis B surface antigen per 1 ml. The standard dosing schedule for Twinrix is a 0-1-6 month schedule.

d. The mixed regimens of Twinrix and separate vaccines that induce adequate immunity in adults (e.g., service members) against these two diseases appear below. This guidance is consistent with that provided by the Centers for Disease Control & Prevention (CDC) to state health departments since 8 Apr 04 (www.cdc.gov/nip/ed/ciinc/powerpoint/4_8_2004/Twinrix-Atkinson.rtf). In the following lines, these codes are used to reflect the adult doses of the corresponding vaccines: H=Havrix, V=Vaqta, E=Engerix-B, R=Recombivax-HB. The individual vaccines within the combinations listed below can be administered in any sequence, if proper minimum timing between doses is observed.

- (1) Twinrix + Twinrix + (H or V) + (E or R)
- (2) Twinrix + 2 doses of (H or V) + 2 doses of (E or R)
- (3) 2 doses of (H or V) + 3 doses of (E or R)

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